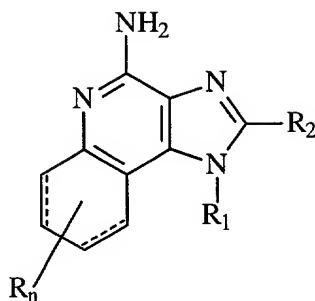


WHAT IS CLAIMED IS:

1. A compound of the formula (I):



(I)

wherein

R₁ is -alkyl-NR₃- SO₂ -X-R₄ or -alkenyl-NR₃- SO₂ -X-R₄ ;

X is a bond or -NR₅-;

R₄ is aryl, heteroaryl, heterocyclyl, alkyl or alkenyl, each of which may be unsubstituted or substituted by one or more substituents selected from the group consisting of:

- alkyl;
- alkenyl;
- aryl;
- heteroaryl;
- heterocyclyl;
- substituted cycloalkyl;
- substituted aryl;
- substituted heteroaryl;
- substituted heterocyclyl;
- O-alkyl;
- O-(alkyl)_{0.1}-aryl;
- O-(alkyl)_{0.1}-substituted aryl;

- O-(alkyl)₀₋₁-heteroaryl;
- O-(alkyl)₀₋₁-substituted heteroaryl;
- O-(alkyl)₀₋₁-heterocyclyl;
- O-(alkyl)₀₋₁-substituted heterocyclyl;
- COOH;
- CO-O-alkyl;
- CO-alkyl;
- S(O)₀₋₂-alkyl;

R₂ is selected from the group consisting of:

- hydrogen;
- alkyl;
- alkenyl;
- aryl;
- substituted aryl;
- heteroaryl;
- substituted heteroaryl;
- alkyl-alkyl;
- alkyl-O- alkenyl; and
- alkyl or alkenyl substituted by one or more substituents selected from the

group consisting of:

- OH;
- halogen;
- N(R₃)₂;
- CO-N(R₃)₂;
- CO-C₁₋₁₀ alkyl;
- CO-O-C₁₋₁₀ alkyl;
- N₃;
- aryl;
- substituted aryl;
- heteroaryl;
- substituted heteroaryl;
- heterocyclyl;
- substituted heterocyclyl;
- CO-aryl;
- CO-(substituted aryl);
- CO-heteroaryl; and
- CO-(substituted heteroaryl);

each **R₃** is independently selected from the group consisting of hydrogen and C₁₋₁₀ alkyl;

R_5 is selected from the group consisting of hydrogen and C_{1-10} alkyl, or R_4 and R_5 can combine to form a 3 to 7 membered heterocyclic or substituted heterocyclic ring;

n is 0 to 4 and each R present is independently selected from the group consisting of C_{1-10} alkyl, C_{1-10} alkoxy, halogen and trifluoromethyl,

or a pharmaceutically acceptable salt thereof.

2. A compound of claim 1 wherein X is a bond.

3. A compound of claim 2 wherein n is 0.

4. A compound of claim 2 wherein each R_3 is hydrogen.

5. A compound of claim 2 wherein R_1 is $-(CH_2)_{2-4}-NR_3-SO_2-R_4$.

6. A compound of claim 2 wherein R_4 is selected from the group consisting of alkyl, aryl and heteroaryl that may be unsubstituted or substituted by one or more substituents selected from the group consisting of:

-alkyl;

-alkenyl;

-aryl;

-heteroaryl;

-heterocyclyl;

-substituted aryl;

-substituted heteroaryl;

-substituted heterocyclyl;

-O-alkyl;

-O-(alkyl)₀₋₁-aryl;

-O-(alkyl)₀₋₁-substituted aryl;

-O-(alkyl)₀₋₁-heteroaryl;

-O-(alkyl)₀₋₁-substituted heteroaryl;

-O-(alkyl)₀₋₁-heterocyclyl;

-O-(alkyl)₀₋₁-substituted heterocyclyl;

- COOH;
- CO-O-alkyl;
- CO-alkyl;
- S(O)₀₋₂-alkyl;
- 5 -S(O)₀₋₂-(alkyl)₀₋₁-aryl;
- S(O)₀₋₂-(alkyl)₀₋₁-substituted aryl;
- S(O)₀₋₂-(alkyl)₀₋₁-heteroaryl;
- S(O)₀₋₂-(alkyl)₀₋₁-substituted heteroaryl;
- S(O)₀₋₂-(alkyl)₀₋₁-heterocyclyl;
- 10 -S(O)₀₋₂-(alkyl)₀₋₁-substituted heterocyclyl;
- (alkyl)₀₋₁-NR₃R₃;
- (alkyl)₀₋₁-NR₃-CO-O-alkyl;
- (alkyl)₀₋₁-NR₃-CO-alkyl;
- (alkyl)₀₋₁-NR₃-CO-aryl;
- 15 -(alkyl)₀₋₁-NR₃-CO-substituted aryl;
- (alkyl)₀₋₁-NR₃-CO-heteroaryl;
- (alkyl)₀₋₁-NR₃-CO-substituted heteroaryl;
- N₃;
- halogen;
- 20 -haloalkyl;
- haloalkoxy;
- CO-haloalkoxy;
- NO₂;
- CN;
- 25 -OH;
- SH; and in the case of alkyl, oxo.

7. A compound of claim 2 wherein R₂ is selected from the group consisting of hydrogen; alkyl; alkyl-O-alkyl; (alkyl)₀₋₁ aryl, (alkyl)₀₋₁-(substituted aryl); (alkyl)₀₋₁-heteroaryl; and (alkyl)₀₋₁-(substituted heteroaryl).

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8. A compound of claim 2 wherein R₂ is selected from the group consisting of hydrogen, C₁₋₄alkyl, and C₁₋₄alkyl-O- C₁₋₄alkyl.

9. A compound of claim 2 wherein the dashed bonds are absent.

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10. A compound of claim 1 wherein X is -NR₅-.

11. A compound of claim 10 wherein n is 0.

10 12. A compound of claim 10 wherein R₁ is -(CH₂)₂₋₄- NR₃- SO₂ -NR₅ -R₄.

13. A compound of claim 10 wherein R₂ is selected from the group consisting of hydrogen; alkyl; alkyl-O-alkyl; (alkyl)₀₋₁ aryl, (alkyl)₀₋₁-(substituted aryl); (alkyl)₀₋₁-heteroaryl; and (alkyl)₀₋₁-(substituted heteroaryl).

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14. A compound of claim 10 wherein R₂ is selected from the group consisting of hydrogen, C₁₋₄alkyl, and C₁₋₄alkyl-O- C₁₋₄alkyl.

15. A compound of claim 10 wherein R₄ and R₅ join to form a 3 to 7 membered heterocyclic or substituted heterocyclic ring.

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16. A compound of claim 10 wherein R₄ and R₅ join to form a substituted or unsubstituted pyrrolidine, morpholine, thiomorpholine, piperidine, or piperazine ring.

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17. A compound of claim 16 wherein R₃ is hydrogen.

18. A compound of claim 15 wherein R₂ is selected from the group consisting of hydrogen; alkyl; alkyl-O-alkyl; (alkyl)₀₋₁ aryl, (alkyl)₀₋₁-(substituted aryl); (alkyl)₀₋₁-heteroaryl; and (alkyl)₀₋₁-(substituted heteroaryl).

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19. A compound of claim 16 wherein R₂ is selected from the group consisting of hydrogen, C₁₋₄alkyl, and C₁₋₄alkyl-O- C₁₋₄alkyl.

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- N⁸-[4-(4-amino-6,7,8,9-tetrahydro-1*H*-imidazo[4,5-*c*]quinolin-1-yl)butyl]-8-quinolinesulfonamide;
- N¹-[4-(4-amino-6,7,8,9-tetrahydro-1*H*-imidazo[4,5-*c*]quinolin-1-yl)butyl]-5-(dimethylamino)-1-naphthalenesulfonamide;
- 5 N¹-[4-(4-amino-2-butyl-1*H*-imidazo[4,5-*c*]quinolin-1-yl)butyl]-4-fluoro-1-benzenesulfonamide;
- N¹-[4-(4-amino-2-butyl-1*H*-imidazo[4,5-*c*]quinolin-1-yl)butyl]-3-fluoro-1-benzenesulfonamide;
- 10 N-{2-[4-amino-2-(ethoxymethyl)-1*H*-imidazo[4,5-*c*]quinolin-1-yl]ethyl}methanesulfonamide;
- N²-{2-[4-amino-2-(ethoxymethyl)-1*H*-imidazo[4,5-*c*]quinolin-1-yl]ethyl}-2-thiophenesulfonamide;
- N¹-{2-[4-amino-2-(ethoxymethyl)-1*H*-imidazo[4,5-*c*]quinolin-1-yl]ethyl}-5-(dimethylamino)-1-naphthalenesulfonamide;
- 15 N-{4-[4-amino-2-(2-methoxyethyl)-1*H*-imidazo[4,5-*c*]quinolin-1-yl]butyl}methanesulfonamide;
- N²-{4-[4-amino-2-(2-methoxyethyl)-1*H*-imidazo[4,5-*c*]quinolin-1-yl]butyl}-2-thiophenesulfonamide;
- N¹-{4-[4-amino-2-(2-methoxyethyl)-1*H*-imidazo[4,5-*c*]quinolin-1-yl]butyl}-5-(dimethylamino)-1-naphthalenesulfonamide;
- 20 N¹-{4-[4-amino-2-(2-methoxyethyl)-1*H*-imidazo[4,5-*c*]quinolin-1-yl]butyl}-4-fluoro-1-benzenesulfonamide;
- N¹-{4-[4-amino-2-(2-methoxyethyl)-1*H*-imidazo[4,5-*c*]quinolin-1-yl]butyl}-3-fluoro-1-benzenesulfonamide;
- 25 N¹-{4-[4-amino-2-(2-methoxyethyl)-1*H*-imidazo[4,5-*c*]quinolin-1-yl]butyl}-1-benzenesulfonamide;
- N⁸-{4-[4-amino-2-(2-methoxyethyl)-1*H*-imidazo[4,5-*c*]quinolin-1-yl]butyl}-8-quinolinesulfonamide;
- N²-{4-[4-amino-2-(4-methoxybenzyl)-1*H*-imidazo[4,5-*c*]quinolin-1-yl]butyl}-2-thiophenesulfonamide;
- 30 N-[4-(4-amino-2-butyl-6,7,8,9-tetrahydro-1*H*-imidazo[4,5-*c*]quinolin-1-yl)butyl]methanesulfonamide;

- N²-[4-(4-amino-2-butyl-6,7,8,9-tetrahydro-1*H*-imidazo[4,5-*c*]quinolin-1-yl)butyl]-2-thiophenesulfonamide;
- N¹-[4-(4-amino-2-butyl-6,7,8,9-tetrahydro-1*H*-imidazo[4,5-*c*]quinolin-1-yl)butyl]-5-(dimethylamino)-1-naphthalenesulfonamide;
- 5 N¹{-4-[4-amino-2-(2-methoxyethyl)-6,7,8,9-tetrahydro-1*H*-imidazo[4,5-*c*]quinolin-1-yl]butyl}-1-benzenesulfonamide;
- N¹-{4-[4-amino-2-(2-methoxyethyl)-6,7,8,9-tetrahydro-1*H*-imidazo[4,5-*c*]quinolin-1-yl]butyl}-5-(dimethylamino)-1-naphthalenesulfonamide;
- 10 N'-{2-[4-amino-2-(ethoxymethyl)-1*H*-imidazo[4,5-*c*]quinolin-1-yl]ethyl}-*N,N*-dimethylsulfamide;
- N'-{4-[4-amino-2-(2-methoxyethyl)-1*H*-imidazo[4,5-*c*]quinolin-1-yl]butyl}-*N,N*-dimethylsulfamide;
- N'-{4-[4-amino-2-(4-methoxybenzyl)-1*H*-imidazo[4,5-*c*]quinolin-1-yl]butyl}-*N,N*-dimethylsulfamide;
- 15 N'-[4-(4-amino-2-butyl-6,7,8,9-tetrahydro-1*H*-imidazo[4,5-*c*]quinolin-1-yl)butyl]-*N,N*-dimethylsulfamide;
- N²-{4-[4-amino-2-(2-methoxyethyl)-6,7,8,9-tetrahydro-1*H*-imidazo[4,5-*c*]quinolin-1-yl]butyl}-*N,N*-dimethylsulfamide;
- 20 N⁴-{4-[4-amino-2-(2-methoxyethyl)-1*H*-imidazo[4,5-*c*]quinolin-1-yl]butyl}-4-thiomorpholinesulfonamide;
- N¹-{4-[4-amino-2-(2-methoxyethyl)-1*H*-imidazo[4,5-*c*]quinolin-1-yl]butyl}-1-pyrrolidinesulfonamide;
- N¹-[4-(4-amino-2-butyl-6,7,8,9-tetrahydro-1*H*-imidazo[4,5-*c*]quinolin-1-yl)butyl]-4-fluoro-1-benzenesulfonamide;
- 25 N-[4-(4-Amino-2-(2-methoxyethyl)-6,7,8,9-tetrahydro-1*H*-imidazo[4,5-*c*]quinolin-1-yl)butyl]methanesulfonamide; and
- N-{4-[4-amino-2-(2-methoxyethyl)-1*H*-imidazo[4,5-*c*]quinolin-1-yl]butyl}phenylmethanesulfonamide.

30 25. A compound selected from the group consisting of:

N¹-[4-(4-Amino-2-butyl-1*H*-imidazo[4,5-*c*]quinolin-1-yl)butyl]-

5-(dimethylamino)-1-naphthalenesulfonamide;
N¹-[4-(4-Amino-1*H*-imidazo[4,5-*c*]quinolin-1-yl)butyl]-
5-(dimethylamino)-1-naphthalenesulfonamide;
N²-[4-(4-Amino-2-butyl-1*H*-imidazo[4,5-*c*]quinolin-1-yl)butyl]-
2-thiophenesulfonamide;
N-[4-(4-Amino-2-butyl-1*H*-imidazo[4,5-*c*]quinolin-1-yl)butyl]-
phenylmethanesulfonamide;
N¹-[4-(4-Amino-2-butyl-1*H*-imidazo[4,5-*c*]quinolin-1-yl)butyl]-
1-benzenesulfonamide;
N-[4-(4-Amino-2-butyl-1*H*-imidazo[4,5-*c*]quinolin-1-yl)butyl]
Methanesulfonamide;
N¹-[4-(4-Amino-2-butyl-1*H*-imidazo[4,5-*c*]quinolin-1-yl)butyl]-
3-nitro-1-benzenesulfonamide;
N¹-[4-(4-Amino-2-butyl-1*H*-imidazo[4,5-*c*]quinolin-1-yl)butyl]-
3-amino-1-benzenesulfonamide;
N¹-[4-(4-Amino-2-butyl-1*H*-imidazo[4,5-*c*]quinolin-1-yl)butyl]-
4-nitro-1-benzenesulfonamide;
N¹-[4-(4-Amino-2-butyl-1*H*-imidazo[4,5-*c*]quinolin-1-yl)butyl]-
4-amino-1-benzenesulfonamide;
N⁵-[4-(4-Amino-2-butyl-1*H*-imidazo[4,5-*c*]quinolin-1-yl)butyl]-
5-isoquinolinesulfonamide
N-[4-(4-Amino-2-(4-methoxybenzyl)-1*H*-imidazo[4,5-*c*]quinolin-1-yl)butyl]-
methanesulfonamide;
N¹-[4-(4-Amino-1*H*-imidazo[4,5-*c*]quinolin-1-yl)butyl]-1-butanesulfonamide;
N¹-[4-(4-Amino-2-(2-methoxyethyl)-6,7,8,9-tetrahydro-
1*H*-imidazo[4,5-*c*]quinolin-1-yl)butyl]-4-fluoro-1-benzenesulfonamide;
N¹-[4-(4-Amino-2-phenyl-1*H*-imidazo[4,5-*c*]quinolin-1-yl)butyl]-
4-fluoro-1-benzenesulfonamide; and
N-[4-(4-Amino-2-phenyl-1*H*-imidazo[4,5-*c*]quinolin-1-yl)butyl]
methanesulfonamide.

26. A pharmaceutical composition comprising a therapeutically effective amount of a compound of claim 1 and a pharmaceutically acceptable carrier.
- 5 27. A pharmaceutical composition comprising a therapeutically effective amount of a compound of claim 2 and a pharmaceutically acceptable carrier.
28. A pharmaceutical composition comprising a therapeutically effective amount of a compound of claim 10 and a pharmaceutically acceptable carrier.
- 10 29. A method of inducing cytokine biosynthesis in an animal comprising administering an effective amount of a compound of claim 1 to the animal.
30. A method of treating a viral disease in an animal comprising administering an effective amount of a compound of claim 1 to the animal.
- 15 31. A method of treating a neoplastic disease in an animal comprising administering an effective amount of a compound of claim 1 to the animal.
32. A method of inducing cytokine biosynthesis in an animal comprising administering an effective amount of a compound of claim 2 to the animal.
- 20 33. A method of treating a viral disease in an animal comprising administering an effective amount of a compound of claim 2 to the animal.
- 25 34. A method of treating a neoplastic disease in an animal comprising administering an effective amount of a compound of claim 2 to the animal.
- 30 35. A method of inducing cytokine biosynthesis in an animal comprising administering an effective amount of a compound of claim 10 to the animal.

36. A method of treating a viral disease in an animal comprising administering an effective amount of a compound of claim 10 to the animal.

37. A method of treating a neoplastic disease in an animal comprising administering an effective amount of a compound of claim 10 to the animal.

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